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EXAMINER

ABEL-JALIL, NEVEEN

ART UNIT PAPER NUMBER

2175

DATE MAILED: 10/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/742,809

Applicant(s)

FAISAL, MOHAMMAD

Examiner

Neveen Abel-Jalil

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because the abstract contains "is disclosed" on line 2. The recitation "is disclosed" should be deleted. Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Wical (U.S. Patent No. 5,953,718).

As to claim 1, Wical discloses a method for generating cross-references among categories in a knowledge base (See column 16, lines 54-57), said method comprising the steps of:

extracting, from a plurality of documents, a plurality of themes, wherein a theme identifies subject matter contained in a corresponding document (See figure 2, 300);

generating a plurality of scores (See figure 2, 310) such that each score identifies a relative theme strength (See figure 2, 320, also see column 7, lines 15-25, Table 1, shows Theme Strength) among theme pairs (See column 10, lines 30-50, wherein theme pairs are (i.e., Bob and Bill)) of said themes extracted from said documents (See column 4, line 6), said theme strength

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reflects the amount of subject matter contained in a document for a corresponding theme relative to other themes in said document (See column 7, lines 32-34);

selecting theme pairs based on said scores (See column 7, lines 56-58);

selecting category pairs in said knowledge base (See column 4, line 46, and also see column 23, lines 46-48) by mapping said themes of said theme pairs selected to corresponding categories of said knowledge base (See column 4, lines 65-66, also see column 22, lines 49-52); and

generating a cross reference in said knowledge base between categories of said category pairs (See column 16, lines 54-57), wherein said cross reference identifies an association between said category pairs (See column 4, lines 26-28) .

As to claim 2, Wical discloses the method as set forth in claim 1, wherein the step of generating a plurality of scores (See column 6, lines 32-33) comprising the steps of:

generating a matrix comprising a plurality of columns and rows to form a plurality of entries, wherein each column represents one of said themes and each row represents one of said themes (See figure 3, wherein “column represents one of said themes” reads on “Documents contains theme”, and figure 8); and

generating a score for at least a subset of said entries of said matrix (See column 6, lines 32-34), such that a score reflects a relative theme strength between two themes represented by said entry for said documents (See column 7, lines 15-25, Table 1, shows Theme Strength).

As to claim 3, Wical discloses the method as set forth in claim 2, wherein:

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the step of extracting a plurality of themes further comprises the step of generating theme strengths for each theme extracted (See column 4, lines 59-62); and the step of generating a score (See column 6, lines 32-34) for at least a subset of said entries of said matrix (See figure 3, wherein "column represents one of said themes" reads on "Documents contains theme", and wherein "score" reads on cumulative No. of "X"'s, also see figure 8) comprises the steps of:

calculating a plurality of products for an entry by multiplying theme strengths (See column 11, lines 5-15, table 4, shows Total Theme Weight) corresponding to two themes represented by said entry (See column 11, lines 5-15, table 4, shows # of Query Terms) for each document (See column 11, lines 5-15, table 4, shows Document100) that includes said two themes represented by said entry; and

summing said products for an entry to generate said score (See column 11, lines 33-34, and column 11, lines, 5-15, table 4, shows Total Score).

As to claim 4, Wical discloses the method as set forth in claim 1, wherein the step of selecting category pairs in said knowledge base (See column 22, lines 49-52) comprises the steps of:

determining whether only one of said themes exist as a category in said knowledge base (See column 7, lines 38-40, also see column 23, lines 46-48);

if so,

generating a new category in said knowledge base for said theme (See column 24, lines 1-4);

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generating a new cross-reference relationship between said new category and a category for which one of said themes exist (See column 24, lines 4-6, wherein “category ... exist” reads on “pre-defined categories”); and generating a new score for said new cross-reference relationship (See figure 5, 450, wherein “new score” reads on “strongest themes”, also see column 9, lines 8-9).

As to claim 5, Wical discloses the method as set forth in claim 1, wherein the step of selecting category pairs in said knowledge base (See column 22, lines 49-52) comprises the steps of:

determining whether both of said themes exist as categories in said knowledge base (See column 23, lines 46-48, also see column 7, lines 38-40); if so,

determining whether a cross reference relationship exists from said category pair (See column 17, lines 16-18, also see figure 6);

if not,

generating a new cross-reference relationship between said category pair (See column 17, lines 48-49, wherein “new cross-reference relationship” reads on “links is generated through processing documents”);

generating a new score for said new cross-reference relationship (See figure 5, 450, wherein “new score” reads on “strongest themes”, also see column 9, lines 8-9); and if so, generating a new score for said existing cross-reference relationship (See column 8, lines 58-60, wherein “existing cross-reference” reads on “Common theme and the additional theme”).

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As to claim 6, Wical discloses a system comprising:

search and retrieval module (See figure 1, search and retrieval system 100) for receiving a user query (See figure 1, shows User Query Arrow) and for generating a query response (See column 4, lines 2-4) including query feedback (See figure 1, shows Query Processing 165);

a knowledge base (See Figure 1, 155), coupled to said search and retrieval module (See figure 1, search and retrieval system 100), for storing relationships among terminology for use as query feedback (See column 3, lines 40-43);

a knowledge base processing system (See Figure 1, Learning Processing 165), coupled to said knowledge base (See Figure 1, Knowledge base 155) for processing a plurality of documents and automatically extending said relationships among said terminology in said knowledge base (See column 16, lines 54-56), said knowledge base processing system for extracting, from said documents, a plurality of themes (See figure 2, 300), wherein a theme identifies subject matter contained in a corresponding document (See column 4, lines 2-4), for generating a plurality of scores (See figure 2, 310) such that each score identifies a relative theme strength among theme pairs of said themes extracted from said documents (See column 7, lines 56-57), said theme strength reflects the amount of subject matter contained in a document for a corresponding theme relative to other themes in said document (See column 7, lines 31-34), for selecting theme pairs based on said scores (See column 8, lines 2-5), for selecting category pairs in said knowledge base by mapping said themes of said theme pairs selected to corresponding categories of said knowledge base (See column 7, lines 38-40, also see column 22, lines 49-52), and for generating a cross reference in said knowledge base between categories

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of said category pairs (See column 16, lines 54-57), wherein said cross reference identifies an association between said category pairs (See column 17, lines 9-11).

As to claim 7, Wical discloses the system as set forth in claim 6, wherein the knowledge base processing system (See figure 1, search and retrieval system 100) further for generating a matrix comprising a plurality of columns and rows to form a plurality of entries, wherein each column represents one of said themes and each row represents one of said themes (See figure 3, wherein "column represents one of said themes" reads on "Documents contains theme", and wherein "score" reads on cumulative No. of "X"'s, also see figure 8) and for generating a score for at least a subset of said entries of said matrix (See column 7, lines 15-25, Table 1, shows Theme Strength), such that a score reflects a relative theme strength between two themes represented by said entry for said documents (See column 6, lines 61-64).

As to claim 8, Wical discloses the system as set forth in claim 7, wherein the knowledge base processing system (See figure 1, search and retrieval system 100) further for generating theme strengths for each theme extracted (See figure 2, 320, also see column 7, lines 15-25, Table 1, shows Theme Strength) for calculating a plurality of products for an entry by multiplying theme strengths (See column 11, lines 5-15, table 4, shows Total Theme Weight) corresponding to two themes represented by said entry (See column 11, lines 5-15, table 4, shows # of Query Terms) for each document (See column 11, lines 5-15, table 4, shows Document100) that includes said two themes represented by said entry, and for summing said

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products for an entry to generate said score (See column 11, lines 33-34, and column 11, lines 5-15, table 4, shows Total Score).

As to claim 9, Wical discloses the system as set forth in claim 7, wherein the knowledge base processing system (See figure 1, search and retrieval system 100) further for determining whether only one of said themes exist as a category in said knowledge base (See column 7, lines 38-40, also see column 23, lines 46-48), if so, for generating a new category in said knowledge base for said theme (See column 24, lines 1-4), for generating a new cross-reference relationship between said new category and a category for which one of said themes exist (See column 24, lines 4-6, wherein "category ...exist" reads on "pre-defined categories"), and for generating a new score for said new cross-reference relationship (See figure 5, List themes in order of strongest theme 450, wherein "new score" reads on "strongest themes", also see column 9, lines 8-9).

As to claim 10, Wical discloses the system as set forth in claim 7, wherein the knowledge base processing system further for determining whether both of said themes exist as categories in said knowledge base (See column 23, lines 46-48); if so, for determining whether a cross reference relationship exists from said category pair (See column 17, lines 16-18, also see figure 6); if not, for generating a new cross-reference relationship between said category pair (See column 17, lines 48-49, wherein "new cross-reference relationship" reads on "links is generated through processing documents"), for generating a new score for said new cross-reference relationship (See figure 5, List themes in order of strongest theme 450, wherein "new score"

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reads on “strongest themes”, also see column 9, lines 8-9); and if so, for generating a new score for said existing cross-reference relationship (See column 8, lines 58-60, wherein “existing cross-reference” reads on “Common theme and the additional theme”).

As to claim 11, Wical discloses a computer readable medium (See figure 11) comprising a plurality of instructions (See column 24, lines 14-15), which when executed, causes the computer to perform the steps of:

extracting, from a plurality of documents, a plurality of themes, wherein a theme identifies subject matter contained in a corresponding document (See figure 2, 300);

generating a plurality of scores (See figure 2, 310) such that each score identifies a relative theme strength (See figure 2, S320, also see column 7, lines 15-25, Table 1, shows Theme Strength) among theme pairs of said themes extracted from said documents (See column 4, line 6), said theme strength reflects the amount of subject matter contained in a document for a corresponding theme relative to other themes in said document (See column 7, lines 32-34);

selecting theme pairs based on said scores (See column 7, lines 32-34);

selecting category pairs in said knowledge base (See column 4, line 46, and also see column 23, lines 46-48) by mapping said themes of said theme pairs selected to corresponding categories of said knowledge base (See column 4, lines 65-66, also see column 22, lines 49-52);
and

generating a cross reference in said knowledge base between categories of said category pairs (See column 16, lines 54-57), wherein said cross reference identifies an association between said category pairs (See column 4, lines 26-28).

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As to claim 12, Wical discloses the computer readable medium (See figure 11) as set forth in claim 11, wherein the step of generating a plurality of scores (See column 6, lines 32-33) comprising the steps of:

generating a matrix comprising a plurality of columns and rows to form a plurality of entries, wherein each column represents one of said themes and each row represents one of said themes (See figure 3, wherein “column represents one of said themes” reads on “Documents contains theme”, and figure 8); and

generating a score for at least a subset of said entries of said matrix (See column 6, lines 32-34), such that a score reflects a relative theme strength between two themes represented by said entry for said documents (See column 7, lines 15-25, Table 1, shows Theme Strength).

As to claim 13, Wical discloses the computer readable medium (See figure 11) as set forth in claim 12, wherein:

the step of extracting a plurality of themes further comprises the step of generating theme strengths for each theme extracted (See column 4, lines 59-62); and

the step of generating a score (See column 6, lines 32-34) for at least a subset of said entries of said matrix (See figure 3, wherein “column represents one of said themes” reads on “Documents contains theme”, and wherein “score” reads on cumulative No. of “X”’s, also see figure 8) comprises the steps of:

calculating a plurality of products for an entry by multiplying theme strengths (See column 11, lines 5-15, table 4, shows Total Theme Weight) corresponding to two themes

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represented by said entry (See column 11, lines 5-15, table 4, shows # of Query Terms) for each document (See column 11, Table 4, document100) that includes said two themes represented by said entry; and

summing said products for an entry to generate said score (See column 11, lines 33-34, and column 11, lines 5-15, table 4, shows Total Score).

As to claim 14, Wical discloses the computer readable medium (See figure 11) as set forth in claim 11, wherein the step of selecting category pairs in said knowledge base (See column 22, lines 49-52) comprises the steps of:

determining whether only one of said themes exist as a category in said knowledge base (See column 7, lines 38-40, also see column 23, lines 46-48);

if so,

generating a new category in said knowledge base for said theme (See column 24, lines 1-4);

generating a new cross-reference relationship between said new category and a category for which one of said themes exist (See column 24, lines 4-6, wherein "category ...exist" reads on "pre-defined categories"); and

generating a new score for said new cross-reference relationship (See figure 5, 450, wherein "new score" reads on "strongest themes", also see column 9, lines 8-9).

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As to claim 15, Wical discloses the computer readable medium (See figure 11) as set forth in claim 11, wherein the step of selecting category pairs in said knowledge base (See column 22, lines 49-52) comprises the steps of:

determining whether both of said themes exist as categories in said knowledge base (See column 23, lines 46-48, also see column 7, lines 38-40);

if so,

determining whether a cross reference relationship exists from said category pair (See column 17, lines 16-18, also see figure 6);

if not,

generating a new cross-reference relationship between said category pair (See column 17, lines 48-49, wherein "new cross-reference relationship" reads on "links is generated through processing documents");

generating a new score for said new cross-reference relationship (See figure 5, 450, wherein "new score" reads on "strongest themes", also see column 9, lines 8-9); and if so,

generating a new score for said existing cross-reference relationship (See column 8, lines 58-60, wherein "existing cross-reference" reads on "Common theme and the additional theme").

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hartnett (U.S. Patent No. 6,064,971)

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neveen Abel-Jalil whose telephone number is 703-305-8114.

The examiner can normally be reached on 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on 703-305-3830. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Neveen Abel-Jalil
September 30, 2002


DOV POPOVICI
SUPERVISORY PATENT EXAMINER
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